

WHAT IS CLAIMED IS:

- 1 1. A test structure for determining the electrical loadability of contacts, the structure
2 comprising:
 - 3 a first interconnect line;
 - 4 a second interconnect line arranged above the first interconnect line;
 - 5 a via electrically coupling the first interconnect line to the second interconnect line;
 - 6 a plurality of additional conductive structures arranged in a closely adjacent manner
7 around the via, the additional structures lying in the same plane as one of the first interconnect
8 line or the second interconnect line.
- 1 2. The test structure of claim 1 wherein the additional structures comprise dummy structures
2 without any circuitry function.
- 1 3. The test structure of claim 1 wherein the additional structures comprise conductive
2 structures that serve a circuitry function.
- 1 4. The test structure of claim 1 wherein the additional structures comprise dummy
2 interconnects.
- 1 5. The test structure of claim 4 wherein at least one dummy interconnect is arranged around
2 the via.
- 1 6. The test structure of claim 5 wherein the dummy interconnects essentially surround the
2 via in an equidistant manner.

1 7. The test structure of claim 1 wherein the first and second interconnects and the additional
2 structures are comprised of the same material.

1 8. The test structure of claim 7 wherein the first and second interconnects and the additional
2 structures are comprised of metal.

1 9. The test structure of claim 8 wherein the first and second interconnects and the additional
2 structures are comprised of aluminum.

1 10. The test structure of claim 8 wherein the first and second interconnects and the additional
2 structures are comprised of copper.

1 11. The test structure of claim 7 wherein the first and second interconnects and the additional
2 structures are comprised of polysilicon.

1 12. A test structure comprising:
2 a first conductive line;
3 at least one insulating layer adjacent the first conductive line;
4 a via formed in a contact hole in the at least one insulating layer, the via being electrically
5 coupled to the first conductive line;
6 a second conductive line disposed in a plane of the first conductive line, the second
7 conductive line extending parallel to a first edge of the first conductive line, extending around
8 the via, and extending parallel to a second edge of the first conductive line, wherein the first edge
9 is opposed to the second edge; and
10 a third conductive line disposed in the plane of the first conductive line, the third

11 conductive line extending parallel to the first edge of the first conductive line, extending around
12 the via, and extending parallel to the second edge of the first conductive line such that the second
13 conductive line is disposed between the first conductive line and the third conductive line.

1 13. The test structure of claim 12 and further comprising a fourth conductive line disposed in
2 the plane of the first conductive line, the fourth conductive line extending parallel to the first
3 edge of the first conductive line, extending around the via, and extending parallel to the second
4 edge of the first conductive line such that the second and third conductive lines are disposed
5 between the first conductive line and the fourth conductive line.

1 14. The test structure of claim 13 wherein the first, second, third and fourth conductive lines
2 comprise aluminum lines.

1 15. The test structure of claim 13 wherein the first, second, third and fourth conductive lines
2 comprise copper lines.

1 16. The test structure of claim 13 wherein the first, second, third and fourth conductive lines
2 comprise polysilicon lines.

1 17. The test structure of claim 12 wherein the at least one insulating layer overlies the first
2 conductive layer.

1 18. The test structure of claim 12 wherein the at least one insulating layer underlies the first
2 conductive layer.

1 19. The test structure of claim 12 wherein the distance between the first edge of the first
2 conductive line and a first edge of the second conductive line is substantially equal to the
3 distance between a second edge of the second conductive line and an edge of the third
4 conductive line.

1 20. The test structure of claim 12 and further comprising a fifth conductive line disposed in a
2 plane that is different than the plane of the first conductive line, the fifth conductive line
3 electrically coupled to the first conductive line through the via.